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Interactive System User's Manual

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CANSIM: INTERACTIVE SYSTEM
USER'S MANUAL

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INTRODUCTION

This manual contains instructions for using the CANSIM Interactive System (CIS), implemented in APLSV-OS-HASP environment. CIS provides access to Statistics Canada's Main Base.

In the examples given, information entered by the user is underlined. Where a YES/NO type answer is requested, Y means YES and N means NO; the full words YES and NO are also acceptable. Some syntax checking is done when retrieval parameters are entered, but there is no guarantee that once the retrieval request is accepted, it will be successful. (For example, the matrix number requested may not exist.) For a more detailed description of the retrieval parameters, error messages, etc., consult the CANSIM Users' Manual for Data Retrieval and Manipulation (Catalogue Number 12-531), available from CANSIM, Current Economic Analysis Division, Statistics Canada, Ottawa. This Manual assumes a familiarity on the part of the reader with the CANSIM Summary Reference Index and CANSIM Main Base Series Directory. These are also available from the CANSIM Staff.

CANSIM Main Base retrievals can be accomplished without knowledge of APL, the language in which the CANSIM Interactive program is written. Data manipulation, however, requires some familiarity with the language. More detailed information on APL may be obtained from the manual APL Language, IBM, GC26-3847-2, File No. S370-22.*

* Copies may be purchased from IBM.

CHAPTER 1 - GENERAL INFORMATION

A. ACCESS CANSIM INTERACTIVE PROGRAM

Note: You must obtain a CANSIM User Code to be an authorized user of the CANSIM Interactive System. To have your APL number authorized to access CANSIM, please contact the CANSIM staff at Statistics Canada.

After signing on to APL, the following procedure must be used to gain access to the CANSIM Interactive program:

EXAMPLE 1

1.)LOAD 601 CANSIM
2. Saved 15.19.14 02/11/77
3. ENGLISH/FRANCAIS? E/F? E

The CANSIM Interactive program is stored in the APL Library 601. To access the program, use the APL system command)LOAD(1).

After CANSIM has been loaded (line 1) CANSIM Interactive will automatically begin executing. Line 3 offers the user the option of accessing an English or French version of the program.

Printed output from a CANSIM retrieval is formatted for a 130- character terminal. If the platen on your terminal is fewer than 130- characters wide, you may lose some print from the right hand end of each line. To avoid this, type:

EXAMPLE 2

1.)LOAD 601 CANSIMW
2. Saved 15.19.14 02/11/77
3. ENGLISH/FRANCAIS? E/F? E
4. ENTER LINE WIDTH(50-130) 80

The output will not be reformatted to center on a smaller platen. However, it will "wrap around"; that is, it will print as much of the line transmitted (for a 130- character terminal) as it can and then move to the next line on the page to finish the line transmitted. For samples of printouts, with the line width set to 80, see Appendices C and D.

NOTE: At this point the user is informed of any messages that have been filed. There are two types of messages - individual and broadcast. Broadcast messages can only be sent by CANSIM staff. They are printed automatically when a user signs on to CANSIM, and are deleted once they are printed.

The user will also be informed if any Individual messages, that is messages that have been sent from other CIS users using the MES Command, are waiting. These messages are printed at the user's request and once printed they are deleted. When printed, each message is preceded by the date it was sent and the account number of the person who sent it. For further details on the MESSAGE command, see page 37.

(1) See APL Language, p. 2.

B. EXIT FROM CANSIM INTERACTIVE PROGRAM

There are two ways to leave the CANSIM Interactive program:

1. Type "STOP" in reply to any question.
2. Press a carriage RETURN after "COMMAND?"

CHAPTER II - TEN COMMANDS IN CANSIM INTERACTIVE PROGRAM

CIS enables a user at a low speed remote terminal to access the CANSIM Main Base by means of a conversational interactive program. This chapter explains how to use the ten commands in the CANSIM Interactive program. Six of the ten commands are concerned with data retrieval, allowing the user to obtain data in a variety of formats, printed, on tape or disk, or in an active APL workspace(2). The other four commands are complementary to the data retrieval commands, enhancing the general applicability and convenience of the system.

As a conversational program, CANSIM Interactive "prompts" the user through the commands; that is, the program asks the user questions, the answers to which define tasks to be performed by CIS. The amount of prompting varies from command to command, but the differences are generally self-explanatory. In many cases, prompting not only includes a question, but it also provides the possible answers among which the user must choose. Four of the data retrieval commands, which involve the longest and most complex prompting, offer experienced users the option of suppressing the prompt and providing the required information in a specific format without help.

There are two "phases", or parts, of three of the data retrieval commands and one of the complementary commands. In PHASE 1, the user defines a request by responding to a few questions. CIS then automatically generates a batch job(3) and creates a file to hold the results. In PHASE 2, the user accesses the file created at the end of PHASE 1. The other six commands do not involve batch jobs and, therefore, have no "phases".

NOTE:

1. The file created by CIS in PHASE 1 is held for seven days before being automatically deleted when a user signs on to the system. If a user does not sign on then these files will not be deleted.

(2) See APL Language, p. 15.

(3) Familiarity with this terminology is not essential to effective use of the system.

A. SIX DATA RETRIEVAL COMMANDS

As mentioned above, CIS includes six data retrieval commands. The first three, TABLE, DISPLAY and MANIPULATE, include two "phases", and a PROMPT option, and involve exactly the same user/system interaction. The only difference among the three is the form of the resulting output.

The TABLE command results in a printed table, with the observations in the retrieved time series printed in columns, the number of columns depending on the number of series retrieved, the size of the machine's platen and the width of each column of data. This command is especially recommended when several series from the same matrix are being retrieved, as the matrix header and notes will be printed once for the entire table. It is to be avoided when series of different periodicity are desired.

The DISPLAY command also results in output printed on the user's low-speed terminal, but in a different format. The matrix header and notes are printed and the data follow, with observations running both across and down the page, depending on the periodicity of the data, the width of the machine's platen and the width of each column of data. If the data is subannual, the quarterly, monthly, etc., observations will be printed across the page. This command is appropriate when the retrieval includes series from several different matrices, as the matrix header and notes are "attached" to the individual series.

The MANIPULATE command results in the availability of CANSIM data in the user's active APL workspace in vector form. (See the APL Language for an explanation.) A reference table is available, listing the series name, the period covered, the number of data points, and the frequency of the series retrieved. However, no matrix headers or notes are printed. It is, therefore, recommended that the user retrieving data with the MANIPULATE command make descriptive notes from the CANSIM Main Base Series Directory when the relevant series identifiers are being located.

I. TABLE, DISPLAY, AND MANIPULATE COMMANDS

a. PHASE 1 - PROMPT

In PHASE 1, the user specifies the parameters of the retrieval, that is, he indicates the series identifiers, time period and security words of the time series to be retrieved. As mentioned above, PHASE 1 of these three commands can be executed with or without prompting.

EXAMPLE 3

1. COMMAND?	<u>TAB</u> (<u>DIS</u>) (<u>MAN</u>)
2. PHASE 1 OR 2? 1/2?	<u>1</u>
3. PROMPT? Y/N?	<u>Y</u>

At line 1, the user indicates the command he wishes to use, and if he chooses one of the above three commands, he is specifying the format he wishes his retrieved data to take. There are ten "right" answers to the question "COMMAND?". If the user fails to respond with one of those ten, the program will shortly respond with a "NOT IMPLEMENTED.." error message, and will re-start (4).

EXAMPLE 4

1. COMMAND?	<u>TAN</u>
2. PHASE 1 OR 2? 1/2?	<u>1</u>
3. NOT IMPLEMENTED	
4. COMMAND?	

NOTE:

The first three letters of any of the commands adequately replies to the question "COMMAND?" The whole word will also be accepted. Example, either MANIPULATE or MAN is acceptable.

If one of the data retrieval commands is correctly entered, the program will implement the command.

EXAMPLE 5

1. COMMAND?	<u>DIS</u>
2. PHASE 1 OR 2? 1/2?	<u>1</u>
3. PROMPT? Y/N?	<u>Y</u>
4. CANSIM OR DATABANK? C/D?	<u>C</u>

At line 3, the user is offered the PROMPT option. As mentioned above, if the user responds to the question "PROMPT?" with Y (or YES), the CIS will ask the user

(4) Other error messages are listed and explained in Appendix A.

a series of questions as in the example below. Regardless of the user's answer at line 3, the program will ask the question "CANSIM OR DATABANK? C/D?", that is, will CANSIM or Databank series identifiers be used? ⁽⁵⁾Each series has two identifiers; regardless of the type of identifiers used, the data retrieved will be the same. However, identifiers on retrieved data may not coincide with identifiers used in PHASE 1.

1. Both CANSIM and Databank identifiers are provided on a DISPLAY printout.
2. Regardless of type of identifiers used in PHASE 1, CANSIM identifiers are used to identify series in a TABLE printout.
3. Regardless of type of identifiers used in PHASE 1, Databank identifiers are used to identify series in an active APL workspace in the MANIPULATE command. (If the RENAME option is used the series will be identified by the name given, regardless of command.)

(i) Retrieval by CANSIM Identifiers

The next four questions will depend on the answer at line 4. If CANSIM identifiers are used, a prompted retrieval proceeds as follows:

EXAMPLE 6

1. COMMAND?
2. PHASE 1 OR 2? 1/2?
3. PROMPT? Y/N?
4. CANSIM OR DATABANK? C/D?
5. MATRIX NO.?
6. ALL/SPECIFIC/RANGE? A/S/R?
7. LIMIT?

Lines 1 - 4 have been explained. At line 5, the user is asked for the matrix number of the data to be retrieved. (The matrix number is the first element in the CANSIM identifier.) At line 6, the user is asked how many series from that matrix are desired.

1. If the user responds with an "A" to the question "A/S/R?", the program will ask for a LIMIT on the number of series to be retrieved (line 7). For example, "A" in reply to line 6 combined with a 5 in response to line 7 will result in the retrieval of the first 5 series in the matrix. If no reply is given to line 7, all series in the matrix will be retrieved.
2. If the user responds with an "R" to the question "A/S/R?", the program will ask "FROM SERIES NO?" and "TO SERIES NO?", that is, "the RANGE of series to be retrieved should run from series _____ to series _____?". The user's response will fill in the blanks, resulting in the retrieval of the series named and all series in between.
3. If the user responds with an "S" to the question "A/S/R?", the program will ask for a SPECIFIC series identifier. After the series identifier is entered, the question "RENAME?" will be asked. If this option is exercised, the retrieved series will be identified with the answer to the question "RENAME?", rather than as indicated above. The new name is limited to eight characters in length,

(5) See the CANSIM Summary Reference Index for an explanation of this question.

the first of which must be alphabetic. If the RENAME option is not desired, execute a carriage RETURN in response to this question.

NOTE:

The RENAME option is not offered with the ALL or RANGE responses because the system is not set up to identify which series would be attached to which new name.

After the series identifiers have been specified, the security word for the series is requested. If the desired series is PUBLIC and no security word is required (check the CANSIM Main Base Series Directory), the appropriate answer to the question "SECURITY WORD?" is a carriage RETURN. If the series is SECURE on CANSIM, and the user has obtained the security word from the originators of the data, it should be entered over the "mask" printed opposite the question "SECURITY WORD?".

NOTE:

Some terminals string the security word "mask" out in a row. In this case, enter the security word at the end of the "mask".

EXAMPLE 7

1. COMMAND?	<u>DIS</u>
2. PHASE 1 OR 2? 1/2?	<u>1</u>
3. PROMPT? Y/N?	<u>Y</u>
4. CANSIM OR DATABANK? C/D?	<u>C</u>
5. MATRIX NO.?	<u>1</u>
6. ALL/SPECIFIC/RANGE? A/S/R?	<u>S</u>
7. SERIES NO.?	<u>1</u>
8. SECURITY WORD?	XXXXXXX
9. START DATE?	<u>7501</u>
10. END DATE?	<u>*</u>
11. RENAME?	
12. MORE? Y/N?	<u>N</u>
13. REQUEST DATA NUMBER IS	<u>04</u>
14. DO YOU WANT HIGH PRIORITY? Y/N?	<u>N</u>
15. ASSIGNED JOB NAME IS:	R0155097
16. JOB R0155097 EXECUTING	PRIORITY 7
17. CONTINUE MONITOR? Y/N?	<u>N</u>

Next the user is asked to specify the time period to be covered by the retrieved series. At line 9 in Example 7 the desired "START DATE?" is requested; at line 10, the desired "END DATE?" is requested. The format for providing this information is YYMMDD.

where, YY indicates the desired year, for example, 1971=71
MM indicates the desired month, for example, April=04
DD indicates the desired day, for example, January 4, 1976=760104

NOTE:

CANSIM includes no daily or weekly data; therefore, the DD part of this format is irrelevant for the TABLE, DISPLAY and MANIPULATE commands. However, this basic format is used in the NEWSFLASH command, where the specification of a desired day is relevant. (See page 34.)

An alternative to the YYMMDD type of answer is available in the asterisk, acceptable in response to either "START DATE?" or "END DATE?". If the asterisk is used in reply to "START DATE?", the series retrieved will start with the earliest observation available on CANSIM for that series. If the asterisk is entered in response to the question "END DATE?", the series will end with the latest (most recent) observation available on CANSIM for that series. Hence, if asterisks are used in response to both questions, all data available on CANSIM for that series will be retrieved.

NOTE:

Not all series on CANSIM have the same periodicity, nor are they up-dated with the same timeliness or frequency. If asterisks are used to indicate the time period to be covered for several series in one retrieval, it should not be expected that all series will necessarily cover the same time period in the resulting output.

At line 11, in reply to "RENAME?", the carriage RETURN will result in the series not being renamed.

Finally, at line 12, CIS asks the question "MORE? Y/N?". If the user answers "Y", the procedure will restart with the question "MATRIX NO.?". If the user answers "N", request data number will be issued (line 13). At line 14, the question "DO YOU WANT HIGH PRIORITY? Y/N?" is asked. At peak system usage times, if very rapid "turnaround" is required, that is, if the data are required very quickly, "high priority" is sometimes useful. However, for most applications, the normal job scheduling results in adequately rapid execution of retrieval jobs. (CPU time for high priority retrievals costs more for the batch processing than for those without top priority.)

NOTE:

The maximum number of jobs in the system under one APL number at any one time is 25.

Once the JOB NAME has been generated, the job has started processing. A message reporting the STATUS of the job in the system will be printed automatically, and the user will be offered the option of monitoring the job as it processes. If the user monitors the request (replies "Y" to the question "CONTINUE MONITOR? Y/N?") status reports will be provided until the job has completed execution. After the STATUS report "JOB RNNNNNNN HAS FINISHED EXECUTION", the CANSIM Interactive program automatically enters PHASE 2 (see page 19).

(ii) Retrieval by Databank Identifiers

The questions asked on lines 1 - 4 and 8 - 10 are the same regardless of whether CANSIM or Databank identifiers are used. However, if the question "CANSIM OR DATABANK? C/D?" is answered with a "D" at line 4, the series identifier prompting will be slightly different from that described above.

At line 4, the reply when using Databank Identifiers to the question "CANSIM OR DATABANK? C/D?" is "D". The next question is "RANGE? Y/N?", that is, are you retrieving a RANGE of series (or a single series)? If you answer "Y", the program will ask "FROM DATABANK NO.?" and "TO DATABANK NO.?" (see Example 9). These questions are analogous to the "FROM SERIES NO.?" and "TO SERIES NO.?" questions in the RANGE retrieval using CANSIM identifiers. However, the RANGE of series retrieved will be defined by the answers to these two questions, even if that RANGE extends beyond one matrix. If the answer to the question "RANGE? Y/N?" is "N" (see Example 8), the inference is that a single series is desired and the program will ask "DATABANK NO.?", and "RENAME?" offering the user the RENAME option.

NOTE:

Databank identifiers are listed in the CANSIM Main Base Series Directory with blanks between their alphabetic and numeric characters. In CIS, these blanks are omitted; for example, D**BBBBB**1 in the Series Directory is entered as D1 in CIS.

After the Databank identifiers have been specified, lines 8 - 11 follow in both examples. If the question "MORE? Y/N?" is answered "Y", the procedure re-starts with the question "RANGE? Y/N?".

EXAMPLE 8

1. COMMAND?	<u>DIS</u>
2. PHASE 1 OR 2? 1/2?	<u>1</u>
3. PROMPT? Y/N?	<u>Y</u>
4. CANSIM OR DATABANK? C/D?	<u>D</u>
5. RANGE? Y/N?	<u>N</u>
6. DATABANK NO.?	<u>D1</u>
7. RENAME?	
8. SECURITY WORD?	XXXXXXX
9. START DATE?	<u>7101</u>
10. END DATE?	<u>*</u>
11. MORE? Y/N?	<u>N</u>

EXAMPLE 9

1. COMMAND?	<u>DIS</u>	
2. PHASE 1 OR 2? 1/2?	<u>1</u>	
3. PROMPT? Y/N?	<u>Y</u>	
4. CANSIM OR DATABANK? C/D?		<u>D</u>
5. RANGE? Y/N?	<u>Y</u>	

6. FROM DATABANK NO.?	<u>D1</u>
7. TO DATABANK NO.?	<u>D5</u>
8. SECURITY WORD?	XXXXXXX
9. START DATE?	<u>7101</u>
10. END DATE?	<u>*</u>
11. MORE? Y/N?	<u>N</u>

b. PHASE 1 - NO PROMPT

For users familiar with CIS, the NO PROMPT option offers a faster means of entering the information required to generate the retrieval job. Lines 1 - 4 are the same under the NO PROMPT and the PROMPT options; only the answer to line 3 is different.

EXAMPLE 10

1. COMMAND?	<u>DIS</u>	
2. PHASE 1 OR 2? 1/2?	<u>1</u>	
3. PROMPT? Y/N?	<u>N</u>	
4. CANSIM OR DATABANK? C/D?		<u>D</u>
5. ?		

A question mark appears at line 5 to indicate that CIS is ready to receive the remaining retrieval parameters. These are entered in a string following the question mark. All parameters must be separated by commas, but the required format depends on whether CANSIM or Databank identifiers are used.

(i) Retrieval by CANSIM Identifiers

The format for CANSIM Identifiers is as follows:

1. SECURITY OPTION (enter "S" for SECURE or "P" for PUBLIC - see CANSIM Main Base Series Directory)
2. START DATE
3. END DATE
4. MATRIX NUMBER
5. SERIES OPTION
 - A - ALL series within matrix
 - S - SPECIFIC series within matrix
 - R - RANGE of series within matrix
6. If ALL is the fifth retrieval parameter chosen, a limit for the number of series to be retrieved may be specified. If RANGE is the fifth retrieval parameter chosen, the "FROM" and "TO" series number must be specified. If SPECIFIC is the fifth retrieval parameter chosen, the series may be renamed. If this option is not used, the series will be identified by its Databank number.

The following example illustrates the use of the NO PROMPT with CANSIM Identifiers:

EXAMPLE 11

- CANSIM OR DATABANK? C/D? C
- a. ? P,5101.7101,1,A,5
5101.7101 INVALID ** REQUEST IGNORED**
The START DATE and END DATE are separated by a period, it should be a comma.
See Appendix A for an explanation of the error message.
- b. ? P,5101,7101,1,A,5
The first five series in matrix 1 are requested.
- c. ? P,*,*,1,R,1.1,1.4
A RANGE of series from series 1.1 to series 1.4 in matrix 1 is requested.
- d. ? S,*,*,1,S,1,1.1,1.2,IMMASIA,1.4
xxxxxxx
Series 1.2 in matrix 1 is renamed IMMASIA. Series 1.1 and 1.4 will be identified by their Databank numbers. Because "S" is specified for SECURITY OPTION, the mask appears on the following line to allow the user to enter the SECURITY WORD.
- e. ? P,*,*,2,1.1,1.1.3,IMMGERM,1.4
1.1 INVALID**REQUEST IGNORED**

Option 5 was omitted, that is, A, R or S was not specified.

When retrieving SPECIFIC series within a matrix, several single series can be specified on the same line as long as their other parameters are the same, (that is, SECURITY, START DATE and END DATE, and MATRIX NUMBER).

(ii) Retrieval by Databank Identifiers

The format for Databank Identification is as follows:

1. SECURITY OPTION (enter "S" for SECURE or "P" for PUBLIC)
2. START DATE
3. END DATE
4. SERIES OPTION
 - RANGE of series
 - SPECIFIC series
5. If RANGE is chosen as the option, the "FROM" and "TO" DATABANK numbers must be specified.
If SPECIFIC is chosen as the option, the series may be renamed. Several single series may be specified on the same line if their SECURITY, START DATE and END DATE parameters are the same.

The following example illustrates the use of the NO PROMPT with Databank identifiers:

EXAMPLE 12

CANSIM OR DATABANK? C/D? D

- a. ? P,*,*,R,D23,D25
Series D23 to D25 are requested.
- b. ? P,*,*,S,D27,TOTIMM,D28,D32,ASIAIMM
Series D27 is renamed TOTIMM, Series D28 is not renamed and Series D32 is renamed ASIAIMM.
- c. ? P,7001,7404,S,D602456
Series D602456 is requested from January 1970 to April 1974.

(iii) Carrying Parameters Forward

After each line of parameters is transmitted, the program will print a question mark to start the next line. If so desired, retrieval parameters can be carried forward from line to line rather than re-entered on each line. Using either CANSIM or Databank identifiers this is done by entering a comma for each parameter that is to be carried forward.

NOTE:

If one parameter is changed, those parameters following the changed parameter must be re-entered and cannot be replaced by commas, even if they are the same as on the previous line.

EXAMPLE 13

? P,*,*,R,D1,D6
? ,, , , ,D27,D32
Series D1 to D6 and D27 to D32 are requested.

(iv) Submitting Jobs of a Recurring Nature

If you have a group of series which are to be retrieved regularly, it is possible to create an APL variable (6), store it in your APL library, and submit your job using the NO PROMPT.

EXAMPLE 14

- A. 1. REQUEST←'P,*,*,S,D5129,D2855,D1439,D607001,D51190,D603060'
- 2.)WSID ANYNAME
- 3. WAS CONTINUE
- 4.)SAVE
- 5. SAVED 15.45.21 08/08/76 ANYNAME
- 6.)LOAD 601 CANSIM
- 7. ENGLISH/FRANCAIS? E/F? E

(6) See APL Language, p. 14.

8.	COMMAND?	<u>DIS</u>
9.	PHASE 1 OR 2? 1/2?	<u>1</u>
10.	PROMPT? Y/N?	<u>N</u>
11.	CANSIM OR DATABANK? C/D?	<u>D</u>
12.	? <u>=REQUEST;ANYNAME</u>	
13.	SAVED 15.51.21 08/08/76	

B. 1.	<u>)LOAD 601 CANSIM</u>	
2.	SAVED 15.19.15 02/11/77	
3.	ENGLISH/FRANCAIS? E/F?	<u>E</u>
4.	COMMAND?	<u>DIS</u>
5.	PHASE 1 OR 2? 1/2?	<u>1</u>
6.	PROMPT? Y/N?	<u>N</u>
7.	CANSIM OR DATABANK? C/D?	<u>D</u>
8.	? <u>P,*,*,S,D5129,D2855,D1439,D607001,D51190,D603060</u>	

In example 14, A and B are identical retrievals. In A, once we are signed on to APL we create an APL variable called REQUEST (line 1); the variable is enclosed between a pair of single quotation marks. This variable is saved in the User's Library (line 4) where it remains until the user removes it:

EXAMPLE 15

A. 1.	<u>)WSID MORE</u>	
2.	WAS CONTINUE	
3.	<u>JOB<'1,S,1,1.2,1.4,1.6,1.8,1.10,1.12'</u>	
4.	<u>)SAVE</u>	
5.	SAVED 16.42.18 08/08/76 MORE	
6.	<u>)LOAD 601 CANSIM</u>	
7.	SAVED 15.19.14 02/11/77	
8.	ENGLISH/FRANCAIS? E/F?	<u>E</u>
9.	COMMAND?	<u>DIS</u>
10.	PHASE 1 OR 2? 1/2?	<u>1</u>
11.	PROMPT? Y/N?	<u>N</u>
12.	CANSIM OR DATABANK? C/D?	<u>C</u>
13.	? <u>P,7001,*,=JOB;MORE</u>	

B. 1.	COMMAND?	<u>DIS</u>
2.	PHASE 1 OR 2? 1/2?	<u>1</u>
3.	PROMPT? Y/N?	<u>N</u>
4.	CANSIM OR DATABANK? C/D?	<u>C</u>
5.	? <u>P,7001,*,1,S,1,1.2,1.4,1.6,1.8,1.10,1.12</u>	

In example 15, A and B again are identical retrievals using the CANSIM Identification Numbers. Note that the APL variable created can contain any group of parameters which are acceptable using the NO PROMPT, but it does not necessarily contain the entire request. When submitting the CANSIM retrieval, the variable name must be preceded by an equal sign (=) and followed by a semicolon (;), then the workspace name containing the variable.

NOTE:

In order to terminate the entering of retrieval parameters with NO PROMPT, press RETURN when the question mark is printed for the next line of parameters. The retrieval request will then begin executing.

c. PHASE 2

As noted above, PHASE 2 of the CANSIM Interactive program provides the user with access to a file created as the result of a retrieval generated in PHASE 1. There are two ways to enter PHASE 2 of the program.

(i) Automatic Transfer to PHASE 2

When the retrieval job generated in PHASE 1 is completed, the job status messages described on page 13 will inform the user that the job has finished execution. The program will then automatically go into PHASE 2.

(ii) Sign-On to PHASE 2

As noted on page 10 the second question in the TABLE, DISPLAY and MANIPULATE commands in the CANSIM Interactive program is "PHASE 1 OR 2? 1/2?". To access a specific file in PHASE 2, the command in PHASE 2 must be the same as that used in PHASE 1 when the retrieval job was generated. When the question "PHASE 1 OR 2? 1/2?" is answered "2", the program asks for a REQUEST DATA NUMBER. The user enters the REQUEST DATA NUMBER provided at the end of PHASE 1 for the specific file desired. If that file is not available, the following message will be printed:

04 JOB NOT YET FINISHED

The output of PHASE 2 depends on whether the data were retrieved using the MANIPULATE command or the TABLE or DISPLAY commands.

If the job was successful using the MANIPULATE command, the series retrieved are brought into the APL workspace as vectors. The system then offers the user the choice of seeing the APL Data Reference Table created from the retrieval by asking "DO YOU WANT APL DATA REFERENCE TABLE? Y/N?" A reply of "Y" will result in a reference table being printed that shows which series were retrieved, their reference dates, the number of data points and their frequency. The series name shown in the table is the Databank Identification, unless the series was renamed (see page 11). After the reference table is printed, the program will ask the question "WANT RETRIEVAL ERROR MESSAGES? Y/N?" and provide the user with the option of seeing what error messages (if any) were generated by the job. These messages differ from those listed in Appendix A. For a list and explanation, see Appendix B. The user then exits from the CANSIM Interactive Program into APL language (see APL Language, p. 7) and can manipulate the retrieved series using APL. If the user chooses not to print the APL Data Reference Table then the system would immediately offer the option of displaying any retrieval error messages.

The following example illustrates signing on to PHASE 2 in the MANIPULATE command to obtain previously requested data:

EXAMPLE 16

1.	COMMAND?	<u>MAN</u>
2.	PHASE 1 OR 2? 1/2?	<u>2</u>
3.	REQUEST DATA NUMBER?	<u>08</u>
4.	DO YOU WANT APL DATA REFERENCE TABLE? Y/N?	<u>Y</u>
5.	CANSIM APL DATA REFERENCE TABLE	

	SERIES	START DATE	END DATE	NO. OF DATA POINTS	FREQUENCY
6.	D2	760100	760400	2	QUARTERLY
7.	D3	760100	760400	2	QUARTERLY

WANT RETRIEVAL ERROR MESSAGES? Y/N? Y

CANSIM RETRIEVAL ERROR MESSAGES

NO ERRORS DETECTED

COMMAND?

END OF EXECUTION

*
*

At this point the user is in APL and has two variables identified as D2 and D3. Note that in reply to "WANT RETRIEVAL ERROR MESSAGES? Y/N?" we replied "Y". The message "NO ERRORS DETECTED" indicates that there were no error messages generated by the job.

When data are retrieved in TABLE or DISPLAY Format, the "CANSIM APL DATA REFERENCE TABLE" does not appear. Immediately, following the REQUEST DATA NUMBER, the question "PAGE ALIGNMENT? Y/N?" is printed; a reply of "Y" will give the user the opportunity to align each page of output. Two asterisks are printed at the left side of the page and the system will go into a wait state (see example 17) to allow the user to move the carriage to the top of a new page. When the paper is ready, the printing of output can be started by pressing RETURN.

EXAMPLE 17

1. PAGE ALIGNMENT? Y/N? Y
2. *
3. *
(System In Wait State)

When there is more than one page of printed output, the double asterisks will be printed at the bottom of each page allowing alignment of the next page. Two colons will be printed at the bottom of the last page. The user is then offered the option of printing the Retrieval Error Messages.

If the reply to "PAGE ALIGNMENT? Y/N?" is "N", printing will start immediately following the carriage RETURN; it will continue printing until the output is finished. When the output has completed printing, the question "WANT RETRIEVAL ERROR MESSAGES? Y/N?" will be asked (see Example 18). As above, the user may print the messages and continue with one of the valid CIS commands or may terminate execution of the program. Unlike in MANIPULATE, when PHASE 2 is completed the retrieved data do not remain in the APL workspace.

EXAMPLE 18

WANT RETRIEVAL ERROR MESSAGES? Y/N? Y
CANSIM RETRIEVAL ERROR MESSAGES

00003S 002314

R - MATRIX FROZEN, DATA NOT AVAILABLE TO
USERS

00001G 001000 1

R - START DATE INCOMPATIBLE, SUBSTITUTING
DATE 750300

JOB SUCCESSFUL - ACCEPTING ERRORS - CHECK

R - AND W - TYPE ERRORS

COMMAND?

END OF EXECUTION

*

*

There were error messages generated by this job. See Appendix B for further explanation of these messages.

2. BATCH COMMAND

a. TABLE AND DISPLAY

The BATCH command is particularly useful for printing large requests which would take a long time to print on a typewriter terminal. The user submits the request via a typewriter terminal, but the printing is done at a high-speed printer. TABLE, DISPLAY and MANIPULATE formats are available and retrieval parameters are entered in response to the same questions as are asked in the TABLE, DISPLAY and MANIPULATE commands. However, there are no "phases" to the BATCH command and BATCH jobs are not monitored by the STATUS command.

EXAMPLE 19

1. COMMAND?	BAT
2. PROMPT? Y/N?	Y
3. REMOTE STATION? (RETURN FOR CENTRAL SITE)	
4. TAB/DIS/UTI/DBNK/MAN? T/D/U/B/M?	T
5. CANSIM OR DATABANK? C/D?	C
6. MATRIX NO.?	3383
7. ALL/SPECIFIC/RANGE? A/S/R?	A
8. LIMIT?	
9. SECURITY WORD?	XXXXXXXX
10. START DATE?	*
11. END DATE?	*
12. MORE? Y/N?	N
13. DO YOU WANT HIGH PRIORITY? Y/N?	N
14. ASSIGNED JOB NAME IS:	R0155097
15. JOB R0155097 EXECUTING	PRIORITY 7
16. CONTINUE MONITOR ? Y/N?	N

The reply to the question "REMOTE STATION? (RETURN FOR CENTRAL SITE)" is a number indicating a high-speed printer for which the user's APL number has been authorized⁽⁷⁾. Requests for which no high-speed printer is designated (a RETURN is entered) are automatically routed to the central site of the host bureau.

In Example 19, a TABLE printout has been requested (see line 4). Lines 5 through 13 are identical to the prompting as already described. The request is identified by the JOB NAME, that is R0155097 in the above example.

To have the printout mailed call the host bureau and provide the JOB NAME.

(7) Authorization and a complete list of acceptable printers can be obtained from the host bureau or the CANSIM Staff.

EXAMPLE 20

```
1.  COMMAND?                                BAT
2.  PROMPT?  Y/N?                            N
3.  REMOTE STATION? (RETURN FOR CENTRAL SITE)
4.  TAB/DIS/UTI/DBNK/MAN?  T/D/U/B/M?      T
5.  CANSIM OR DATABANK?      C/D?          C
6.  ? P,7501,*,1,S,1
7.  ?
8.  DO YOU WANT HIGH PRIORITY?  Y/N?        N
9.  ASSIGNED JOB NAME IS:      R0215097
10. JOB R0215097 EXECUTING      PRIORITY 7
11. CONTINUE MONITOR?  Y/N?          N
12. COMMAND?
13. END OF EXECUTION
    *
    *
```

Example 20 shows the NO PROMPT option.

b. MANIPULATE

When using MANIPULATE format (Example 21A) in BATCH the user creates a file of the data requested. The output DATA SET NAME must begin with A1650.APL. Rather than going into PHASE 2 of CIS, the user can access the file created through a self-starting workspace called APLFILE, (Example 21B) and manipulate the retrieved series using APL. Only when the user chooses to read the data set does the system offer the option of printing the APL Data Reference Table (line 5). This workspace also allows the user to scratch a data set(s) which has been created. (Example 21C)

NOTE: It is the user's responsibility to scratch these data sets.

EXAMPLE 21

```
A. 1.  COMMAND?                                BAT
    2.  PROMPT?  Y/N?                            N
    3.  REMOTE STATION? (RETURN FOR CENTRAL SITE)
    4.  TAB/DIS/UTI/DBNK/MAN?  T/D/U/B/M?      M
    5.  OUTPUT DATA SET NAME?                  A1650.APL.TEST
    6.  CANSIM OR DATABANK      C/D?          D
    7.  ? P,7501,*,R,D1,D10
    8.  ?
    9.  DO YOU WANT HIGH PRIORITY?  Y/N?        N
   10. ASSIGNED JOB NAME IS:      R0095097
   11. JOB R0095097 EXECUTING      PRIORITY 7
   12. CONTINUE MONITOR?  Y/N?          N
```

B. 1.)LOAD 601 APLFILE
 2. SAVED 15.19.14 08/08/76
 3. OS DATA SET NAME? A1650.APL.TEST
 4. READ(1)? OR SCRATCH(2)? 1/2? 1
 5. DO YOU WANT APL DATA REFERENCE TABLE? Y/N? Y
 6. SERIES START DATE END DATE NO. OF DATA POINTS FREQUENCY
 D1 750100 760400 6 QUARTERLY
 D2 750100 760400 6 QUARTERLY
 D3 750100 760400 6 QUARTERLY
 D4 750100 760400 6 QUARTERLY
 D5 750100 760400 6 QUARTERLY
 D6 750100 760400 6 QUARTERLY
 D7 750100 760400 6 QUARTERLY
 D8 750100 760400 6 QUARTERLY
 D9 750100 760400 6 QUARTERLY
 D10 750100 760400 6 QUARTERLY
 7. END OF EXECUTION.

C. 1.)LOAD 601 APLFILE
 2. SAVED 15.19.14 08/08/76
 3. OS DATA SET NAME? A1650.APL.TEST
 4. READ(1)? OR SCRATCH (2)? 1/2? 2
 5. DONE
 6. OS DATA SET NAME?
 7. END OF EXECUTION.

C. TAPE OR DISK

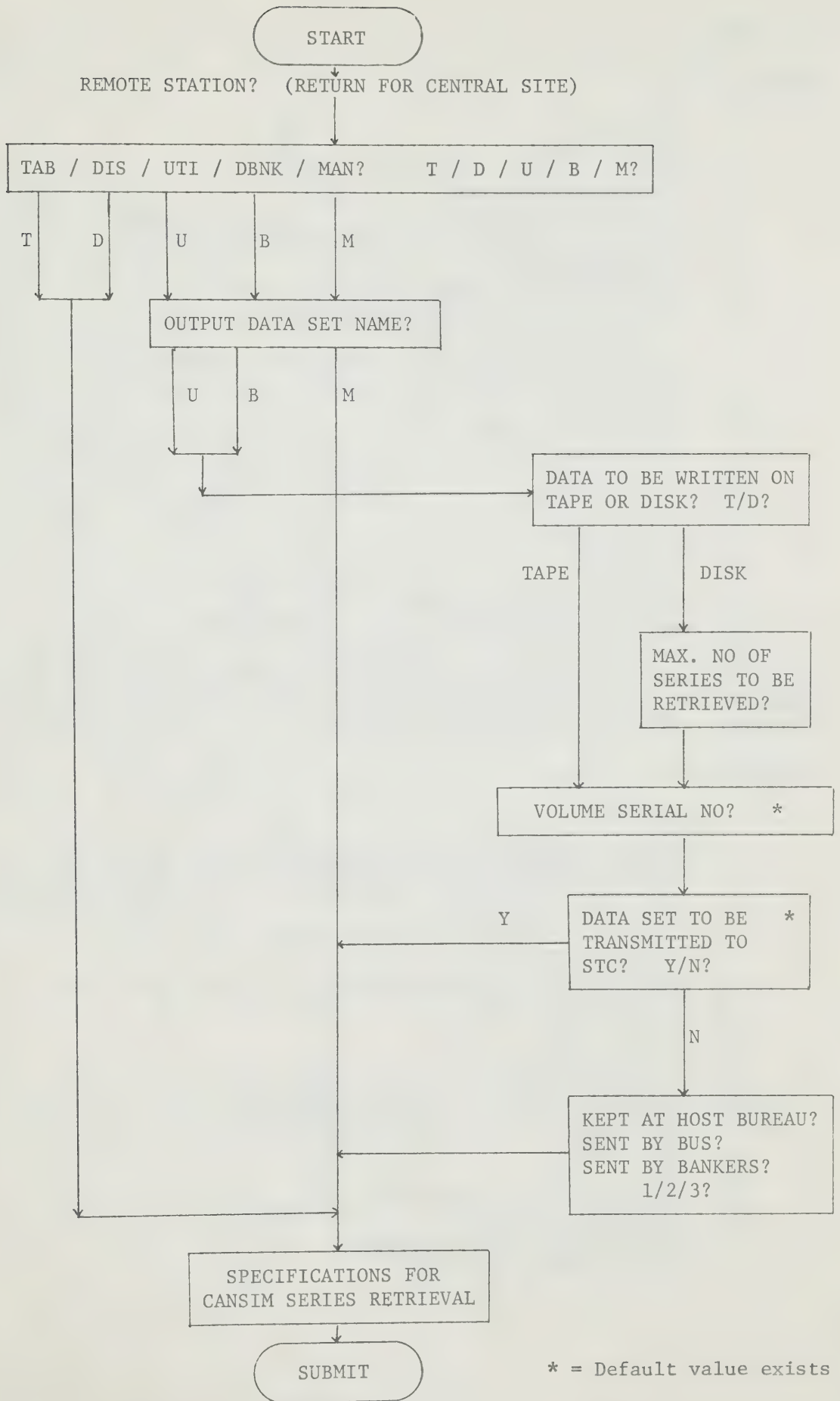
CIS can also be used to generate tape or disk output from CANSIM. Data can be retrieved in either of two formats, "UTILITY" or "DATABANK". Details of their record structure can be obtained from the CANSIM Users' Manual for Data Retrieval and Manipulation, (Catalogue #12-531, Statistics Canada).

When tape is specified as the output medium, and the tape is not transmitted, the user chooses between keeping the tape at the host bureau, having the tape sent to the user by Banker's Dispatch, or having the tape sent to the user by Voyageur Bus Lines.

In all retrievals, the O.S. batch catalogued procedures are used. This allows the use of the default options of the catalogued procedures with the exception of the DATA SET NAME. This must be specified and must begin with A1650.APL.

Except for those questions in which all choices are displayed, a carriage RETURN will result in the choice of the catalogued procedure default option (a summary of default options is given on page 28).

Since the questions vary depending on preceding responses, it is easiest to illustrate question flow with the attached chart and several examples.



(1) Prompt

EXAMPLE 22

1.	COMMAND?		<u>BAT</u>	
2.	PROMPT? Y/N?		<u>Y</u>	
3.	REMOTE STATION? (RETURN FOR CENTRAL SITE)			
4.	TAB/DIS/UTI/DBNK/MAN? T/D/U/B/M?			<u>U</u>
5.	OUTPUT DATA SET NAME?			<u>A1650.APL.UTIL.</u>
6.	DATA TO BE WRITTEN ON TAPE OR DISK? T/D?		<u>T</u>	
7.	VOLUME SERIAL NO. ?			
8.	DATA SET TO BE TRANSMITTED TO STC? Y/N?		<u>N</u>	
9.	TAPE TO BE KEPT AT HOST BUREAU(1)			
	SENT TO YOU BY BUS(2)			
	SENT TO YOU BY BANKER DISPATCH(3)	1/2/3?		<u>2</u>
10.	CANSIM OR DATABANK? C/D?		<u>C</u>	
11.	MATRIX NO.?	<u>39</u>		
12.	ALL/SPECIFIC/RANGE? A/S/R?		<u>R</u>	
13.	FROM SERIES NO. ?		<u>1.1</u>	
14.	TO SERIES NO. ?		<u>1.3</u>	
15.	SECURITY WORD?		<u>XXXXXXXX</u>	
16.	START DATE?		<u>*</u>	
17.	END DATE?		<u>*</u>	
18.	MORE? Y/N?		<u>N</u>	
19.	DO YOU WANT HIGH PRIORITY? Y/N?		<u>N</u>	
20.	ASSIGNED JOB NAME IS:			R0205097

Example 22 creates a tape (line 6) in UTILITY Format (line 4) of CANSIM series 1.1 to 1.3 in matrix 39 (lines 11 to 14). The BATCH listing will print at the host bureau's central site (line 3).

EXAMPLE 23

1.	COMMAND?		<u>BAT</u>	
2.	PROMPT? Y/N?		<u>Y</u>	
3.	REMOTE STATION? (RETURN FOR CENTRAL SITE)			<u>13</u>
4.	TAB/DIS/UTI/DBNK/MAN? T/D/U/B/M?			<u>U</u>
5.	OUTPUT DATA SET NAME?			<u>A1650.APL.TAPE</u>
6.	DATA TO BE WRITTEN ON TAPE OR DISK? T/D?		<u>T</u>	
7.	VOLUME SERIAL NO. ?			
8.	DATA SET TO BE TRANSMITTED TO STC? Y/N?		<u>Y</u>	
9.	CANSIM OR DATABANK? C/D?		<u>D</u>	
10.	RANGE? Y/N?	<u>Y</u>		
11.	FROM DATABANK NO. ?		<u>D1</u>	
12.	TO DATABANK NO. ?		<u>D10</u>	
13.	SECURITY WORD?		<u>XXXXXXXX</u>	
14.	START DATE?		<u>7401</u>	
15.	END DATE?		<u>*</u>	
16.	MORE? Y/N?		<u>*</u>	
17.	DO YOU WANT HIGH PRIORITY? Y/N?		<u>N</u>	
18.	ASSIGNED JOB NAME IS:			R0165097
19.	JOB R0165097 AWAITS EXECUTION			
20.	CONTINUE MONITOR? Y/N?		<u>N</u>	

Example 23 creates a tape (line 6) in UTILITY format (line 4) of CANSIM series D1 to D10 (lines 11-14). The BATCH listing will be printed at CANSIM, Statistics Canada (line 3) and the tape will also be transmitted there (line 8)(8).

EXAMPLE 24

1. COMMAND?	BAT	
2. PROMPT? Y/N?	<u>Y</u>	
3. REMOTE STATION? (RETURN FOR CENTRAL SITE)		
4. TAB/DIS/UTI/DBNK/MAN? T/D/U/B/M?		<u>U</u>
5. OUTPUT DATA SET NAME?		<u>A1650.APL.TEST</u>
6. DATA TO BE WRITTEN ON TAPE OR DISK? T/D?		<u>D</u>
7. MAX. NO. OF SERIES TO BE RETRIEVED?		
8. VOLUME SERIAL NO. ?		
9. DATA SET TO BE TRANSMITTED TO STC? Y/N?		<u>N</u>
10. CANSIM OR DATABANK?	C/D?	<u>D</u>
11. RANGE? Y/N?	<u>Y</u>	
12. FROM DATABANK NO. ?	<u>D1</u>	
13. TO DATABANK NO. ?	<u>D7</u>	
14. SECURITY WORD?	<u>XXXXXXXX</u>	
15. START DATE?	<u>*</u>	
16. END DATE?	<u>*</u>	
17. MORE? Y/N?	<u>N</u>	
18. DO YOU WANT HIGH PRIORITY? Y/N?	<u>N</u>	

Example 24 creates a disk file in UTILITY Format (line 4) of CANSIM series with Databank identifiers D1 to D7 at the host bureau (line 3). The parameters for the output devices (lines 5 to 8) follow the standards for the host bureau computer system. The OUTPUT DATA SET NAME (line 5) must start with A1650.APL. A particular volume may be specified if it is certain that space exists on that disk. If none is specified, as in the example (line 8), the system will store that file. When the number of series to be retrieved is specified (line 7) the required disk storage for the file is reserved. The default value is 100 series.

A disk file created in this way cannot be accessed through CIS: however they can be accessed using utility functions in APL. To use the disk file in batch processing, the "VOLUME SERIAL NO." listing must be consulted.

(ii) No Prompt

The BATCH command also offers a NO PROMPT option for tape and disk output.

-
- (8) The user should call CANSIM Staff (613) 995-0575 before submitting the job and ask if the tape drive can be used for a transmit. After the job is submitted the user should also call and give the JOBNAME to the operator.

EXAMPLE 25

1. COMMAND?	<u>BAT</u>
2. PROMPT? Y/N?	<u>N</u>
3. REMOTE STATION? (RETURN FOR CENTRAL SITE)	
4. TAB/DIS/UTI/DBNK/MAN? T/D/U/B/M?	<u>B</u>
5. OUTPUT DATA SET NAME?	<u>A1650.APL.MASS</u>
6. DATA TO BE WRITTEN ON TAPE OR DISK? T/D?	<u>T</u>
7. VOLUME SERIAL NO. ?	
8. DATA SET TO BE TRANSMITTED TO STC? Y/N?	<u>N</u>
9. TAPE TO BE KEPT AT HOST BUREAU(1)	
SENT TO YOU BY BUS(2)	
SENT TO YOU BY BANKER DISPATCH(3)? 1/2/3?	<u>2</u>
10. SINGLE OR DOUBLE PRECISION? S/D?	<u>S</u>
11. CANSIM OR DATABANK? C/D?	<u>C</u>
? <u>P,*,*,430,A</u>	
?	
DO YOU WANT HIGH PRIORITY? Y/N?	<u>Y</u>

Lines 1-9 are the same as those generated with the PROMPT option (Example 19). In this example the user has created a high-speed tape (line 6) in DATABANK format (line 4) and must specify if the tape is to be in single or double precision (line 10).

After this information has been entered, the system will respond with "CANSIM OR DATABANK? C/D?", as with the NO PROMPT option in the TABLE, DISPLAY and MANIPULATE commands. The CANSIM retrieval parameters are to be entered, that is SECURITY, START DATE, END DATE, etc.

DEFAULT PARAMETERS

QUESTION

DEFAULT OPTION

OUTPUT DATA SET NAME?	Must be specified starting with A1650.APL.
DATA TO BE WRITTEN ON TAPE OR DISK? T/D?	9 Track tape/on-line Disk
VOLUME SERIAL NO. ?	SCRATCH (scratch volume)
MAX. NO. OF SERIES TO BE RETRIEVED?	100 (Not used if tape is specified)
DATA SET TO BE TRANSMITTED TO STC? Y/N?	No transmit

3. GNP COMMAND

The GNP command in CIS is different from the other four data retrieval commands in two ways. First, it enables the user to reproduce one or more of the tables found in Statistics Canada's quarterly National Income and Expenditure Accounts publication (Catalogue #13-001). Second, the tables are stored so that they can be accessed interactively by APL; thus, there are no "phases" in the GNP command as there are in the TABLE, DISPLAY and MANIPULATE commands.

NOTE:

The smallest unit of output using this command is a full table; individual series must be obtained using one of the other commands.

These tables are normally available from CANSIM on the day of release of the quarterly National Accounts. The output is designed for a 130-character line; an 80-character line may be used; however, the output will be difficult to interpret. Using an 80-character terminal, each 130-character line of output from the tables will be split into two parts on the terminal. One part will contain the first 80 characters of output and the second part will be the remaining 50 characters.

To obtain a printout of all the tables and their respective analyses, one can type a "Y" after the question, "DO YOU WANT ALL THE TABLES BY A BATCH JOB? Y/N?". (See Example 26, line 2). The tables can be printed at the host bureau's central site by simply typing in a carriage return after the prompt, "TO WHICH REMOTE FOR PRINTOUT? ('RETURN' FOR CENTRAL SITE)" (Line 3). Alternatively, another valid Remote number may be entered.

In order to obtain your output when it has printed call the host bureau and provide the JOBNAME.

EXAMPLE 26

```
1. COMMAND?                GNP
2. DO YOU WANT ALL THE TABLES BY A BATCH JOB? Y/N?    Y
3. TO WHICH REMOTE FOR PRINTOUT? ('RETURN' FOR CENTRAL SITE)
   JOBNAME R0224097 PROGRAMMER NAME 'GTSS      '
4. COMMAND?
5. END OF EXECUTION
   *
   *
```

EXAMPLE 27

```
1. COMMAND?                GNP
2. DO YOU WANT ALL THE TABLES BY A BATCH JOB? Y/N?    N
3. DO YOU WANT THE TABLE TITLES Y/N?    N
4. DO YOU WANT PAGE ALIGNMENT? Y/N?    N
5. DATA AVAILABLE FOR 68-76 WHICH DO YOU WANT?      (YY OR YY-YY) 75-76
6. ENTER TABLES WANTED (OR 'RETURN')    1
```

A list of the Table Titles (line 3) is provided in Appendix G; and the result of this request (line 6) is printed in Appendix H.

The user can request page alignment by typing in a "Y" after the prompt "DO YOU WANT PAGE ALIGNMENT? Y/N?" (line 4). Two asterisks (*) will be typed by the system on the terminal before printing of any of the National Accounts Tables. This pause will allow the user to align the paper after which the "RETURN" is pressed to start the output again. With no page alignment, the tables will be printed one after the other.

National Accounts tables can be selectively retrieved by entering the table number, (or numbers separated by blanks or commas) after the prompt "ENTER TABLE(S) WANTED OR 'RETURN'" (line 6). By pressing 'RETURN', one will obtain none of the tables.

Analyses are available for the tables containing seasonally adjusted values. At the end of any of these tables, a list of item numbers that have statistics associated with them, are printed. An item number is printed on the left hand side of each of the National Accounts tables and one uses this (these) number(s) to respond to the prompt, "WHICH ANALYSES DO YOU WANT (OR 'RETURN')".

EXAMPLE 28

```
ANALYSIS AVAILABLE FOR THE FOLLOWING ITEMS: 1 2 3 4 5 6 7 8 9 10
WHICH ANALYSES DO YOU WANT (OR 'RETURN')  1
```


4. CEA COMMAND

The CEA command in CIS provides the user with access to the Current Economic Analysis Tables. The tables contain five years of annual data and two years of monthly or quarterly data for key economic indicators. The data is presented in a form to facilitate analysis, such as the percentage change from the previous period or the ratio of one series to another.

NOTE: Asterisks (*) are printed when the figures are not available in CANSIM.

The following tables are available:

Table 1: Income and Expenditure Aggregates

Table 2: Income and Expenditure Aggregates

Table 3: Real Output by Industry

Table 4: Canadian Balance of International Payments

Table 5: External Trade

Table 6: Prices and Costs

Table 7: Prices and Costs, National Accounts Implicit Price Indexes.

Table 8: Demand Indicators

Table 9: Labour Force and Employment

Table 10: Financial Indicators

The tables are stored so that they can be accessed interactively by APL and therefore there are no phases in the CEA command.

Presently a table is updated at least twice a week. However in approximately two months it will be possible to update a table as soon as any of the data in that table is updated on the CANSIM Main Base. If the user types a "Y" after the question "DO YOU WANT THE TABLE TITLES? Y/N?" an index is printed containing the table number, the complete table title, and the date and time that the table was last updated. The output is designed for a 130 character line although an 80 character line may be used causing one line of the table to be split over two lines on the terminal.

To obtain a printout of all the tables one can type a "Y" after the question "DO YOU WANT ALL THE TABLES BY A BATCH JOB? Y/N?" The table can be printed at the host bureau's central site by typing a carriage RETURN or at a remote printer by entering a valid remote number (Example 30).

The user can request page alignment by typing a "Y" after the prompt "DO YOU WANT PAGE ALIGNMENT? Y/N?" Two asterisks will be typed by the system on the terminal before printing the tables and there will be a pause during which the user can align the paper. Enter a carriage RETURN to start the table printing.

The tables can be retrieved selectively by entering the table number (or numbers separated by blanks or commas) after the prompt "ENTER TABLES WANTED OR 'RETURN'". If RETURN is entered, no tables are printed. A complete index containing table numbers and titles etc. (line 3) is contained in Appendix I; the result of this request (line 5) is printed in Appendix J.

EXAMPLE 29

1. COMMAND?	<u>CEA</u>
2. DO YOU WANT ALL THE TABLES BY A BATCH JOB? Y/N?	<u>N</u>
3. DO YOU WANT THE TABLE TITLES? Y/N?	<u>N</u>
4. DO YOU WANT PAGE ALIGNMENT? Y/N?	<u>N</u>
5. ENTER TABLES WANTED OR 'RETURN'	<u>6</u>

EXAMPLE 30

1. COMMAND?	<u>CEA</u>
2. DO YOU WANT ALL THE TABLES BY BATCH JOB? Y/N?	<u>Y</u>
3. TO WHICH REMOTE FOR PRINTOUT, (RETURN FOR CENTRAL SITE)	
4. ASSIGNED JOB NAME IS: R2789805	

B. FOUR COMPLEMENTARY COMMANDS

The commands described in this section of the Manual have been developed to facilitate best use of not only the CANSIM Interactive System itself, but also all information in the system.

1. NEWSFLASH COMMAND

The CANSIM database is up-dated daily. The NEWSFLASH command provides access to a list of the matrices that have been up-dated on a given day. The name and number of the matrix and the period covered by the up-date are reported.

The NEWSFLASH command includes two "phases", as do the TABLE, DISPLAY and MANIPULATE commands. When the response to the question "PHASE 1 OR 2? 1/2?" is "1" in the NEWSFLASH command, the program asks for the first and last day for which the list of up-dates should be retrieved. The format for entering the START/END DATES is YYMMDD (see page 12); asterisks are not accepted for the NEWSFLASH command. However, the NEWSFLASH for the current day can be retrieved by entering a carriage RETURN after the question "START DATE?"

NOTE:

The NEWSFLASH reports on a maximum of two months and a minimum of one month. At the first of each month, NEWSFLASH for the second preceding month are deleted. For example, on January 31, 1976, NEWSFLASHes were available for the entire months of December and January; as of February 1, 1976, NEWSFLASHes were available only for the month of January and February 1st.

To retrieve the CANSIM NEWSFLASH via APL, the COMMAND is NEWS. Besides the COMMAND, the user is required to enter the PHASE (i.e. 1 or 2) as well as the START-END date.

EXAMPLE 31

1. COMMAND?	<u>NEWS</u>	
2. PHASE 1 OR 2? 1/2?	<u>1</u>	
3. START DATE?		<u>750610</u>
4. END DATE?		<u>750611</u>
5. REQUEST DATA NUMBER IS	25	
6. DO YOU WANT HIGH PRIORITY? Y/N?	<u>N</u>	
7. ASSIGNED JOB NAME IS	R0135098	
8. JOB R0135098 AWAITS EXECUTION		
9. CONTINUE REQUEST MONITOR? Y/N?	<u>N</u>	
10. COMMAND?		
END OF EXECUTION		
*		
*		
11. COMMAND?	<u>NEWS</u>	
12. PHASE 1 OR 2? 1/2?	<u>2</u>	
13. REQUEST DATA NUMBER?	<u>25</u>	
14. PAGE ALIGNMENT? Y/N?	<u>N</u>	

2. STATUS COMMAND

The STATUS command enables the user to monitor for those CIS jobs which have been submitted to the system on his account using the TABLE, DISPLAY, MANIPULATE and NEWSFLASH commands. Two status levels are reported: EXECUTING and FINISHED. When a job has FINISHED, PHASE 2 may be used to access the file.

NOTE:

If the user has no jobs in CIS, the STATUS command will result in the message "NO JOB IN THE SYSTEM". (See example 33).

EXAMPLE 32

1.	COMMAND?				<u>STA</u>
2.	REQUEST NUMBER	DATE	TIME	TYPE	STATUS
	31	760805	11:48	TAB	FINISHED
	32	760806	13:25	TAB	FINISHED
	34	760809	8:33	DIS	FINISHED
	35	760809	13:25	DIS	FINISHED
	36	760809	15:46	DIS	FINISHED

The sequence of the jobs is by time and date of submission.

EXAMPLE 33

1.	COMMAND?	<u>STA</u>
2.	NO JOB IN THE SYSTEM.	
3.	COMMAND?	
4.	END OF EXECUTION	
	*	
	*	

3. SCRATCH COMMAND

The SCRATCH command enables the user to delete any file that has been created as the result of a job submitted in PHASE 1 of the TABLE, DISPLAY, MANIPULATE and NEWSFLASH commands. As noted on page 8, files older than seven days are automatically scratched when a user signs on to the system. However, if a file is no longer needed, its deletion using the SCRATCH command will minimize storage costs.

When SCRATCH is the response to the question "COMMAND?", the program asks for the REQUEST DATA NUMBER of the file to be deleted. After that number is entered, the system will respond with "DONE" and prompt for other REQUEST DATA NUMBERS until a blank RETURN.

EXAMPLE 34

1.	COMMAND?	<u>SCR</u>	
2.	REQUEST DATA NUMBER?		<u>31</u>
3.	DONE		
4.	REQUEST DATA NUMBER?		<u>32</u>
5.	DONE		
6.	REQUEST DATA NUMBER?		<u>34</u>
7.	DONE		
8.	REQUEST DATA NUMBER?		<u>35</u>
9.	DONE		
10.	REQUEST DATA NUMBER?		<u>36</u>
11.	DONE		
12.	REQUEST DATA NUMBER?		
13.	COMMAND?		

4. MESSAGE COMMAND

The MESSAGE command enables the user to send messages to the CANSIM Staff or the other CANSIM users. Messages sent using this command are filed by APL number and held for the intended recipient until he accesses and deletes them. APL numbers of CANSIM users can be obtained from the CANSIM Staff or from the host bureau. Because of the lock code, distribution of APL numbers does not compromise the security of the account.

When MESSAGE is entered in response to the question "COMMAND?", the program asks for the APL number of the account to receive the message. A message is nine seventy-character lines in length; if this is inadequate, two or more messages may be sent. After the APL number is entered, the program prompts the user, prints a line of numbers to mark off seventy characters, and returns with a question mark.

Any message shorter than nine seventy-character lines will be accepted. If only one line is being sent, a carriage RETURN is entered on the second question mark.

NOTE:

Comments or suggestions regarding the CANSIM Interactive System or data in CANSIM should be directed to APL number 116509702.

EXAMPLE 35

1.	COMMAND?	<u>MES</u>
2.	TO APL NUMBER?	<u>116509702</u>
3.	MESSAGE(S) SHOULD BE NO LONGER THAN 9 70-CHARACTER LINES	
4.	123456789.123456789.123456789.123456789.123456789.123456789.123456789.	
5.	? <u>THIS IS A TEST MESSAGE</u>	
6.	?	

CANSIM INTERACTIVE SYSTEM ERROR MESSAGES

"DATE SHOULD BE 6 NUMERIC DIGITS" - The user is attempting to use an alphabetic or a special character for the start or end date option; the only valid characters are numerics.

"DATE SHOULD HAVE FORMAT YYMMDD" - When retrieving the CANSIM NEWSFLASH the start and end date must be specified in the format YYMMDD, i.e. year, month, day.

"DATE SHOULD HAVE FORMAT YYMMDD OR *" - Only two, four, or six numeric characters or one asterisk are valid for this option.

"DATE INVALID. TRY AGAIN." - The date for the GNP Command must be in the format YY (year) when only one year is required or YY-YY when more than one year is required.

"DD (IN YYMMDD) FIELD INVALID" - The DD (day) field of the start or end date can only contain numeric characters from 01 to 31.

"END DATE MUST NOT BE LESS THAN START" - The user is attempting to use an end date which is not greater than or equal to the start date which has been specified.

"FIRST CHARACTER MUST BE ALPHABETIC" - When using the RENAME option, the first character of the new name must be alphabetic.

"ILLEGAL RESPONSE" - The user is entering a character which is not acceptable; read the question for the choice of valid responses.

"INVALID DATABANK NUMBER - A valid Databank Number contains from two to eight characters the first of which must be alphabetic and all other characters must be numeric.

"INVALID FORMAT. TRY AGAIN." - National Accounts Tables can be retrieved (using the GNP Command) by entering the desired table numbers separated by blanks or commas.

"INVALID ** REQUEST IGNORED**" - The user is entering an invalid field with the NO PROMPT option.

"INVALID TABLE NUMBER" - The user is entering an incorrect table number with the GNP and/or CEA Command. Check appendices G and I for the correct table numbers.

"INVALID USE OF EQUAL SIGN" - The equal sign can only be used with the NO PROMPT and it must precede a variable name which is stored in the user's APL library.

"JOB FOR THIS NUMBER FAILED" - Because of a system problem, the job has failed. There is no data retrieved nor are there any error messages; the job must be resubmitted.

"JOB NOT YET FINISHED" - The user is attempting to output a retrieval which has not yet finished execution; the STATUS command will indicate when the job has finished.

"JOB TABLE FULL" - The user can have a maximum of 25 jobs (under one APL number) in the system at one time; either output the data using PHASE 2 or use the SCRATCH command to delete the data sets.

"LIMIT MUST BE 4 DIGITS MAX" - When specifying the limit with the ALL option, the limit can be no greater than four numeric digits.

"MATRIX NO., MAX LENGTH IS 6" - A valid matrix number is one to six numbers; consult the CANSIM Main Base Series Directory for valid matrix numbers.

"MATRIX NO. SHOULD BE NUMERIC" - A valid matrix number contains neither alphabetic nor special characters; consult the CANSIM Main Base Series Directory for valid matrix numbers.

"MAX. 8 CHARACTERS" - When using the RENAME option, the new name can contain a maximum of eight characters.

"MM (IN YYMMDD) FIELD INVALID" - The MM (month) field of the start or end date can only contain numeric characters from 01 to 12.

"NO DATA AVAILABLE" - No data has been retrieved; check the CANSIM Retrieval Error Messages.

"NO ERRORS DETECTED" - The retrieval contains all the data as specified by the user.

"NO JOB IN THE SYSTEM" - The user receives this message in response to the STATUS command when the user has no jobs in the system.

"NO SPECIAL CHARACTERS ALLOWED" - When using the RENAME option, the new name cannot contain special characters.

"NOT IMPLEMENTED" - The user is attempting to use a command other than one of the nine which are valid.

"REQUEST NUMBER MUST BE 2 NUMERIC DIGITS" - The user is attempting to use alphabetic or special characters; only 2 numeric characters are permitted.

"SERIES MUST NOT EXCEED 20 CHARACTERS" - Valid series numbers contain from one to twenty characters; consult the CANSIM Main Base Series Directory for valid series numbers.

"SERIES NOT IN PROPER FORMAT" - Valid series numbers contain from one to twenty characters the first and last of which must be numeric. No alphabetic characters are allowed; the only special character acceptable is the period. Consult the CANSIM Main Base Series Directory for valid series numbers.

"THIS APL NUMBER IS NOT REGISTERED" - An unregistered user is attempting to sign on to CIS, or a user is attempting to send a message to an APL number which is not an authorized CIS user. To have your APL number authorized to access CANSIM, contact CANSIM Staff at (613)995-7406.

"THIS NUMBER IS NOT IN THE SYSTEM" - In PHASE 2, the user is attempting to output a Request Data Number which is not in the system. Use the STATUS command to obtain a list of jobs currently in the system.

"THIS REMOTE NOT AVAILABLE FOR YOUR APL NO." - When an APL number is authorized to retrieve data from CANSIM, valid remote stations are also assigned. The user is attempting to use a remote station which has not been assigned. To have your list of valid remote stations changed, contact CANSIM Staff at (613) 995-7406.

"WORKSPACE FULL" - There is insufficient space in the APL workspace to store all the data retrieved.

CANSIM RETRIEVAL ERROR MESSAGES

When a job is submitted and the retrieved data is not exactly what was requested, the system gives the user the option of printing any messages which the system has generated. If the output is exactly what was requested, no messages are generated.

For example, the user requests five time series starting in January, 1960. Of the five series requested, the earliest date available for one of the series is January, 1961. The system will retrieve four series starting in January, 1960, and the fifth series starting in January, 1961. In addition, the user has the option to print the error message which will read:

```
"00005G    000655    1    R - START DATE
INCOMPATIBLE, SUBSTITUTING DATE 610100".
```

The "00005G" indicates that it is the fifth series requested; the "000655 1" is the CANSIM Identification Number of the series, i.e. matrix 655 series 1. A list of messages follows:

'JOB TERMINATED - SYSTEM ERROR' - Save all printouts associated with the run and contact the CANSIM Staff, Statistics Canada, at (613) 995-7406.

'R - END DATE INCOMPATIBLE, SUBSTITUTING DATE-----' - The supplied end date does not match any reference date for this series. Retrieve the CANSIM NEWSFLASH for information on the latest data available or check with the source (see Inquiries List).

'R - FROM MASSAGER NUMBER NOT ON BASE' - The first Databank number in range specified could not be found on the CANSIM base. Check the CANSIM Main Base Series Directory for valid Databank numbers.

'R - FROM SERIES NOT IN MATRIX' - The series number specified in the FROM series number field could not be found in the matrix specified. Check the CANSIM Main Base Series Directory for valid series numbers.

'R - INVALID SECURITY WORD, PUBLIC DATA ONLY RETRIEVED-----DATAPOINTS REPLACED BY ZERO/SEC' - The supplied security word is not correct. If the data is required, check with the responsible source (see Inquiries List) for the proper word.

'R - MASSAGER NUMBER NOT ON BASE' - The Databank number requested could not be found on the CANSIM base. Check the CANSIM Main Base Series Directory for valid Databank numbers.

'R - MATRIX FROZEN, DATA NOT AVAILABLE TO USERS' - the matrix requested is temporarily not available. Retrieve the CANSIM NEWSFLASH or check with the data source (see Inquiries List) to find out when it will be released.

'R - MATRIX NOT ON BASE' - The matrix number specified could not be found on the CANSIM base. Check the CANSIM Main Base Series Directory for valid matrix numbers.

'R - NO DATA IN SERIES' - The series header information has been entered on the base; however, no data is currently available. Check with CANSIM Staff, Statistics Canada at (613) 995-7406 for data availability.

'R - NUMBER OF DATA POINTS EXCEEDS LIMIT' - The number of data points allowed by the Databank format for one series exceeds 1200 in double precision or 2400 in single precision.

'R - RANGE OF MASSAGER NUMBERS NOT ON BASE' - None of the Databank numbers in the range requested could be found on the CANSIM base. Check the CANSIM Main Base Series Directory for valid Databank numbers.

'R - REPORT FREQUENCY NOT COMPATIBLE WITH MASSAGER' - The MASSAGER format permits only Annual, Quarterly, Monthly or Weekly series to be retrieved. If an attempt is made to retrieve a series with another frequency, the request is ignored and this message printed out.

'R - SERIES FROZEN, DATA NOT AVAILABLE TO USERS' - the series requested is temporarily not available. Retrieve the CANSIM NEWSFLASH or check with the data source (see Inquiries List) to find out when it will be released.

'R - SERIES NOT IN MATRIX' - The series number specified could not be found in the matrix specified. Check the CANSIM Main Base Series Directory for valid series numbers.

'R - START DATE INCOMPATIBLE, SUBSTITUTING DATE-----' - The supplied start date does not match any reference date for this series. Check the CANSIM Main Base Series Directory for valid start date.

'R - START-END DATE OUT OF RANGE, NO DATA RETRIEVED' - The supplied start-end dates are either both prior to or both after the period of data available for this series. Check the CANSIM Main Base Series Directory for the start date.

'R - TO MASSAGER NUMBER NOT ON BASE' - The last Databank number in range specified could not be found on the CANSIM base. Check the CANSIM Main Base Series Directory for valid Databank numbers.

'R - TO SERIES NOT IN MATRIX' - The series number specified in the TO series number field could not be found in the matrix specified. Check the CANSIM Main Base Series Directory for valid series numbers.

'W - ALL SERIES NOT RETRIEVED. LIMITED TO NUMBER SPECIFIED' - When the ALL option is used, the number of series retrieved is limited to quantity specified.

'W - HIGHER LEVEL DATA NOT RETRIEVED - -----DATAPOINTS REPLACED BY ZERO/SEC' - The supplied security word or a blank was used in retrieving the data; however data with a higher security level exists in this series. If the data is required, check with the responsible source (see Inquiries List) for the security word.

000428 DATE: MAR. 16 1977 PAGE 1 CANSIM DATA RETRIEVAL
 CONSUMER PRICE INDEXES FOR CANADA, 1971=100, MONTHLY.

MATRIX NOTE

AS OF AUGUST 1975, THE CPI WAS CONVERTED TO A 1971=100 TIME REFERENCE
 BASE, REPLACING THE BASE OF 19
 61=100 WHICH HAS BEEN IN EFFECT SINCE JANUARY 1969. THE WEIGHTING PATT
 ERN OF THE CPI WAS REVISED EFF
 ECTIVE MAY 1973. FOR DETAILED EXPLANATION OF CONCEPTS AND METHODS, CON
 TACT SOURCE.

COLUMN 1 1 ALL-ITEMS
 COLUMN 2 1.1 FOOD
 COLUMN 3 1.1.1 FOOD FOR HOME CONSUMPTION
 COLUMN 4 1.1.1.1 DAIRY PRODUCTS INCLUDING BUTTER

DATE: MAR. 16 1977 PAGE 2 CANSIM DATA RETRIEVAL
 -- COLUMN 1 -- -- COLUMN 2 -- -- COLUMN 3 -- -- COLUMN 4 --

DATE	INDEX NO.	FOOT	INDEX NO.	FOOT	INDEX NO.	FOOT	INDEX NO.	FOOT
YYMMDD	UNITS	NOTE	UNITS	NOTE	UNITS	NOTE	UNITS	NOTE
760100	145.1		166.8		165.7		168.5	
760200	145.6		166.3		164.9		168.2	
760300	146.2		165.1		163.4		168.7	
760400	146.8		164.5		162.5		168.8	
760500	148.0		167.0		165.3		170.0	
760600	148.7		167.3		165.5		171.0	
760700	149.3		167.8		165.8		171.8	
760800	150.0		166.9		164.6		172.2	
760900	150.7		165.8		163.1		173.1	
761000	151.7		165.8		163.0		173.5	
761100	152.2		165.4		162.3		176.1	
761200	152.7		166.0		162.6		176.8	
770100	154.0		168.0		164.9		177.3	
770200	155.4		171.4		168.8		177.4	

APPENDIX D

CANSIM DATA RETRIEVAL

D 1 DATE: MAR 16, 1977
000001.1
ANDS
MATRIX TITLE: ESTIMATED POPULATION OF CANADA BY PROVINCE, QUARTERLY, THOUS
ANDS OF PERSONS
SERIES TITLE: CANADA

UNIT OF MEASURE: PERSONS
1ST 2ND 3RD

4TH

73-01-00	21,984	22,047	22,125
22,207			
74-01-00	22,307	22,384	22,479
22,574			
75-01-00	22,650	22,737	22,831
22,923			
76-01-00	22,998	23,063	23,143
23,231			

SOURCE: CATALOGUE NO. 91-001, CENSUS, STATISTICS CANADA

NOTE: ESTIMATES FOR CALENDAR QUARTERLY PERIODS, FROM JAN. 1946. QUARTERLY DATA RELATE TO JAN. 1, APP.1, JULY 1, AND OCT. 1. FOR ESTIMATED POPULATION BY PROVINCE, AS OF JUNE 1 FOR YEARS 1946 ONWARDS, SEE MAT RIX 60. DATA PUBLISHED APPROXIMATELY 75 CALENDAR DAYS AFTER END OF REFERENCE QUARTER. ESTIMATES FROM JULY 1, 1976 ARE BASED ON JUNE 1, 1971 AND THEREFORE SUBJECT TO ADJUSTMENT AFTER RELEASE OF THE 1976 CENSUS.

FOOTNOTE: NIL FOOTNOTES REFERENCED

WANT RETRIEVAL ERROR MESSAGES?Y/N? N

COMMAND?
END OF EXECUTION

CANSIM DATA RETRIEVAL DATE: MAR. 16 1977

CONSUMER PRICE INDEXES FOR CANADA, 1971=100, MONTHLY.
MATRIX NOTE
AS OF AUGUST 1975, THE CPI WAS CONVERTED TO A 1971=100 TIME REFERENCE BASE, REPLACING THE BASE OF 1961=100 WHICH HAS BEEN IN EFFECT SINCE JANUARY 1969. THE WEIGHTING PATTERN OF THE CPI WAS REVISED EFFECTIVE MAY 1973. FOR DETAILED EXPLANATION OF CONCEPTS AND METHODS, CONTACT SOURCE.

ALL-ITEMS

ALL-ITEMS									
FOOD									
FOOD FOR HOME CONSUMPTION									
DAIRY PRODUCTS INCLUDING BUTTER									
FRESH MILK									
EVAPORATED MILK									
POWDERED SKIM MILK									
CANSIM DATA RETRIEVAL									
DATE: MAR. 16 1977									
-- COLUMN 1 --									
INDEX NO.	FOOT	INDEX NO.	FOOT	INDEX NO.	FOOT	INDEX NO.	FOOT	INDEX NO.	FOOT
UNITS	NOTE	UNITS	NOTE	UNITS	NOTE	UNITS	NOTE	UNITS	NOTE
145.1	166.8	165.7	168.5	170.6	197.8	144.0			
145.6	166.3	164.9	168.2	170.6	196.5	143.9			
146.2	165.1	163.4	168.7	170.9	197.8	144.0			
146.8	164.5	162.5	168.8	171.0	197.9	143.8			
148.0	167.0	165.3	170.0	171.6	198.0	144.0			
148.7	167.3	165.5	171.0	172.0	201.8	147.3			
149.3	167.8	165.8	171.8	171.7	202.8	148.2			
150.0	166.9	164.6	172.2	171.7	205.4	149.4			
150.7	165.8	163.1	173.1	172.8	207.6	151.8			
151.7	165.8	163.0	173.5	173.1	207.1	152.5			
152.2	165.4	162.3	176.1	176.6	207.7	153.3			
152.7	166.0	162.6	176.8	177.2	208.1	154.0			
154.0	168.0	164.9	177.3	177.3	209.0	153.2			
155.4	171.4	168.8	177.4	177.3	209.3	155.3			

DATE: MAR 16, 1977

FREQUENCY: MONTHLY

CANSIM DATA RETRIEVAL
SCALAR FACTOR: UNIT
1971=100, MONTHLY.

000428.1

D 616101

MATRIX TITLE: CONSUMER PRICE INDEXES FOR CANADA, 1971=100, MONTHLY.

SERIES TITLE: ALL-ITEMS

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
68-01-00	88.5	88.6	88.9	89.4	89.4	89.7	90.3	90.5	90.8	91.0	91.4	917
69-01-00	91.9	91.9	92.4	93.4	93.6	94.4	94.8	95.1	94.9	95.1	95.5	959
70-01-00	96.1	96.5	96.6	97.2	97.2	97.4	97.8	97.8	97.6	97.7	97.7	973
71-01-00	97.7	98.1	98.4	99.1	99.5	99.7	100.5	101.2	101.0	101.1	101.5	1022
72-01-00	102.5	102.9	103.0	103.6	103.7	103.8	105.1	105.9	106.3	106.4	106.7	1074
73-01-00	108.3	108.9	109.2	110.4	111.2	112.2	113.2	114.7	115.4	115.7	116.6	1172
74-01-00	118.1	119.3	120.5	121.4	123.4	125.0	125.9	127.1	127.9	129.1	130.5	1318
75-01-00	132.4	133.4	134.1	134.8	135.9	137.9	139.8	141.2	141.5	142.8	144.1	1443
76-01-00	145.1	145.6	146.2	146.8	148.0	148.7	149.3	150.0	150.7	151.7	152.2	1527
77-01-00	154.0	155.4										

SOURCE: CONSUMER PRICE INDEXES, CAT. 62-010.
NOTE: AS OF AUGUST 1975, THE CPI WAS CONVERTED TO A 1971=100 TIME REFERENCE BASE, REPLACING THE BASE OF 1961=100 WHICH HAS BEEN IN EFFECT SINCE JANUARY 1969. THE WEIGHTING PATTERN OF THE CPI WAS REVISED EFFECTIVE MAY 1973. FOR DETAILED EXPLANATION OF CONCEPTS AND METHODS, CONTACT SOURCE.

FOOTNOTE: NIL FOOTNOTES REFERENCED

WANT RETRIEVAL ERROR MESSAGES?Y/N?

N

COMMAND?
END OF EXECUTION

1. NATIONAL INCOME AND GROSS NATIONAL PRODUCT
 2. GROSS NATIONAL EXPENDITURE
 3. RELATION OF GNP AT MARKET PRICES AND GDP AT FACTOR COST (D - DOMESTIC)
 4. SOURCES OF PERSONAL INCOME
 5. DISPOSITION OF PERSONAL INCOME
 6. GOV'T REVENUE, EXPENDITURE AND SURPLUS OR DEFICIT BY GOV'T LEVEL
 7. TRANSACT. OF RESIDENTS WITH NON-RESID. IN NATIONAL INC. AND EXP. ACCOUNTS
 8. SOURCES OF GROSS SAVING
 - 8A. UNDISTRIBUTED CORPORATION PROFITS
 9. DISPOSITION OF GROSS SAVING
 10. GROSS NATIONAL EXPENDITURE IN CONSTANT (1971) DOLLARS
 11. NATIONAL INCOME AND GROSS NATIONAL PRODUCT (SEASONALLY ADJUSTED)
 12. GROSS NATIONAL EXPENDITURE (SEASONALLY ADJUSTED)
 13. (SA) RELATION OF GNP AT MARKET PRICES AND GDP AT FACTOR COST (D - DOMESTIC)
 14. SOURCES OF PERSONAL INCOME (SEASONALLY ADJUSTED)
 15. DISPOSITION OF PERSONAL INCOME (SEASONALLY ADJUSTED)
 16. GOV'T REVENUE, EXPEND. AND SURPLUS OR DEFICIT BY GOV'T LEVEL (SA)
 17. (SA) TRANS. OF RESIDENTS WITH NON-RESID. IN NATIONAL INC. AND EXP. ACCOUNTS
 18. SOURCES OF GROSS SAVING (SEASONALLY ADJUSTED)
 - 18A. UNDISTRIBUTED CORPORATION PROFITS (SEASONALLY ADJUSTED)
 19. DISPOSITION OF GROSS SAVING (SEASONALLY ADJUSTED)
 20. GROSS NATIONAL EXPENDITURE IN CONSTANT (1971) DOLLARS (SEASONALLY ADJUSTED)
 21. IMPLICIT PRICE INDEXES, GROSS NATIONAL EXPENDITURE (SEASONALLY ADJUSTED)
- DO YOU WANT PAGE ALIGNMENT? Y/N?
- DATA AVAILABLE FOR 75-76 WHICH DO YOU WANT? (YY OR YY-YY) 75-76

ENTER TABLES WANTED (OR 'RETURN')

1 PERSONAL EXPENDITURE ON CONSUMER GOODS AND SERVICES/
DEPENSES PERSONNELLES EN BIENS ET SERVICES
DE CONSOMMATION.....

1	DEFENSES PERSONNELLES EN BIENS ET SERVICES/ DE CONSOMMATION.....	132.2	134.8	137.9	141.0	136.5	143.0	145.1	147.3	149.0	146.1
2	DURABLE GOODS - BIENS DURABLES.....	121.3	122.2	122.7	125.0	122.9	128.1	128.9	129.5	130.8	129.4
3	SEMI-DURABLE GOODS - BIENS SEMI-DURABLES.....	125.2	126.2	127.8	129.0	127.1	131.8	133.3	135.3	136.4	134.2
4	NON-DURABLE GOODS - BIENS NON DURABLES.....	140.2	144.3	149.2	152.9	146.7	152.9	154.3	154.7	156.6	154.7
5	SERVICES.....	133.0	135.9	140.1	144.0	138.3	146.1	149.8	154.2	156.1	151.6
6	GOVERNMENT CURRENT EXPENDITURE ON GOODS AND SERVICES/ DEFENSES PUBLIQUES COURANTES EN BIENS ET SERVICES....	143.1	147.3	154.0	155.4	150.0	160.0	172.6	168.5	179.2	170.1
7	GROSS FIXED CAPITAL FORMATION/ FORMATION BRUTE DE CAPITAL FIXE.....	145.4	149.7	153.7	157.8	151.8	161.4	164.1	167.4	170.0	165.7
8	GOVERNMENT - SECTEUR PUBLIC.....	147.5	152.2	156.4	159.0	153.8	162.3	164.0	167.2	169.1	165.5
9	NON-RESIDENTIAL CONSTRUCTION/ CONSTRUCTION NON RESIDENTIELLE.....	150.9	156.4	160.5	163.4	157.8	167.0	169.6	173.9	175.4	171.3
10	MACHINERY AND EQUIPMENT - MACHINES ET MATERIEL...	130.1	132.0	132.9	134.0	132.2	135.8	135.3	136.0	137.5	136.2
11	BUSINESS - SECTEUR DES ENTREPRISES.....	145.0	149.2	153.1	157.6	151.4	161.3	164.1	167.4	170.2	165.7
12	RESIDENTIAL CONSTRUCTION/ CONSTRUCTION RESIDENTIELLE.....	162.5	166.0	170.8	178.1	169.8	184.7	187.2	190.7	196.9	189.9
13	NON-RESIDENTIAL CONSTRUCTION/ CONSTRUCTION NON RESIDENTIELLE.....	141.5	145.5	150.8	155.3	148.5	158.0	162.2	165.6	168.1	163.2
14	MACHINERY AND EQUIPMENT - MACHINES ET MATERIEL...	138.9	143.3	144.8	146.6	143.4	148.7	150.3	152.3	154.4	151.5
15	EXPORTS OF GOODS AND SERVICES/ EXPORTATIONS DE BIENS ET SERVICES.....	163.8	166.5	171.1	172.7	168.5	171.6	172.1	174.8	175.5	173.5
16	(OF WHICH: MERCHANDISE) - (DONT: MARCHANDISES).....	168.9	171.1	175.3	176.7	173.0	174.8	174.8	177.0	177.3	176.0
17	DEDUCT: IMPORTS OF GOODS AND SERVICES/ MOINS:IMPORTATIONS DE BIENS ET SERVICES.....	150.3	153.0	155.2	153.8	153.0	154.8	155.5	156.4	156.8	155.9
18	(OF WHICH: MERCHANDISE) - (DONT: MARCHANDISES).....	154.6	156.8	158.9	155.4	156.4	157.4	157.6	158.1	157.4	157.6
19	GROSS NATIONAL EXPENDITURE - DEPENSE NATIONALE BRUTE.	140.0	142.7	147.2	150.7	145.2	153.8	158.3	160.1	163.6	158.9

ANALYSIS AVAILABLE FOR THE FOLLOWING ITEMS
WHICH ANALYSES DO YOU WANT (OR 'RETURN')

TABLE	DATE	TIME	TITLE
1	77/03/02	17.19.49	INCOME AND EXPENDITURE AGGREGATES MILLIONS OF CONSTANT 1971 DOLLARS PERCENTAGE CHANGES OF SEASONALLY ADJUSTED FIGURES
2	77/03/01	16.45.21	INCOME AND EXPENDITURE AGGREGATES MILLIONS OF DOLLARS PERCENTAGE CHANGES OF SEASONALLY ADJUSTED FIGURES
3	77/03/02	16.42.57	REAL OUTPUT BY INDUSTRY 1971 = 100 PERCENTAGE CHANGES OF SEASONALLY ADJUSTED FIGURES
4	77/02/28	14.42.33	CANADIAN BALANCE OF INTERNATIONAL PAYMENTS MILLIONS OF DOLLARS
5	77/02/28	17.12.42	EXTERNAL TRADE MILLIONS OF DOLLARS PERCENTAGE CHANGES OF SEASONALLY ADJUSTED FIGURES
6	77/03/15	15.00.32	PRICES AND COSTS PERCENTAGE CHANGES OF UNADJUSTED FIGURES
7	77/02/28	14.44.05	PRICES AND COSTS NATIONAL ACCOUNTS IMPLICIT PRICE INDEXES PERCENTAGE CHANGES OF SEASONALLY ADJUSTED FIGURES
8	77/03/15	15.01.36	DEMAND INDICATORS PERCENTAGE CHANGES OF SEASONALLY ADJUSTED FIGURES
9	77/03/01	16.53.20	LABOUR FORCE AND EMPLOYMENT SEASONALLY ADJUSTED
10	77/03/15	15.17.39	FINANCIAL INDICATORS

DO YOU WANT PAGE ALIGNMENT? Y/N?

N

ENTER TABLES WANTED (OR 'RETURN')

6

PRICES AND COSTS
PERCENTAGE CHANGES OF UNADJUSTED FIGURES

	CONSUMER PRICE INDEX			WHOLESALE PRICE INDEX			INDUSTRY SELLING PRICE INDEX			FARM PRICES INDEX			RESIDENTIAL NONRESIDENTIAL CONSTRUCTION INPUTS PRICE INDEX			OUTPUT PER PERSON EMPLOYED (1)			UNIT LABOUR COSTS (1)		
	TOTAL	FOOD	NON-FOOD	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PRICE INDEX	PER PERSON EMPLOYED (1)	PER PERSON EMPLOYED (1)	PER PERSON EMPLOYED (1)	UNIT LABOUR COSTS (1)	UNIT LABOUR COSTS (1)	UNIT LABOUR COSTS (1)
1972	4.2	7.6	3.7	7.0	4.5	13.4	10.1	7.8	102.0	106.2											
1973	7.6	14.6	5.1	21.5	11.2	44.3	12.0	9.0	103.8	114.3											
1974	10.9	16.3	8.8	22.4	19.0	19.5	9.3	15.8	103.7	129.7											
1975	10.8	12.9	10.1	6.6	11.2	-0.5	6.9	10.6	101.9	149.4											
1976	7.5	2.7	9.4	4.3	5.1	-3.9	11.5	9.9	104.3	164.4											
1975	0.5	-0.4	0.9	-1.2	-0.1	-0.4	0.6	-0.2	101.3	145.4											
APR	0.5	0.5	0.6	1.0	0.9	2.2	1.3	0.4	101.9	145.8											
MAY	0.8	1.1	0.7	0.5	1.0	4.0	2.9	2.8	101.0	148.3											
JUN	1.5	3.2	0.8	-0.3	0.0	2.7	1.0	1.3	101.3	149.3											
JUL	1.4	2.3	1.0	1.4	0.7	1.3	1.9	0.3	102.0	153.0											
AUG	1.0	1.0	0.9	2.0	0.8	-3.4	0.9	1.0	102.3	150.1											
SEP	0.2	-0.7	0.7	0.4	0.7	-0.4	0.1	0.9	101.5	150.1											
OCT	0.9	0.4	1.1	0.6	0.7	-0.4	0.1	0.9	101.5	150.1											
NOV	0.9	0.6	1.0	0.8	0.7	-1.2	1.4	1.4	101.2	154.2											
DEC	0.1	-0.7	0.5	0.3	-0.2	-2.0	0.7	0.8	102.0	153.2											
1976	0.6	-0.2	0.8	0.4	0.5	0.5	0.8	0.6	103.6	154.8											
JAN	0.3	-0.3	0.7	0.1	0.1	0.0	0.5	0.0	102.8	156.0											
FEB	0.4	-0.7	0.8	0.3	0.4	-1.0	1.0	0.4	103.2	158.3											
MAR	0.4	-0.4	0.7	0.8	0.4	2.3	0.8	1.1	104.5	158.6											
APR	0.8	1.5	0.6	0.3	0.6	0.6	2.1	3.3	104.9	159.2											
MAY	0.5	0.2	0.5	0.7	0.4	0.5	0.1	0.3	104.9	164.9											
JUN	0.4	0.3	0.6	0.3	0.2	-0.5	0.4	0.3	104.4	166.9											
JUL	0.5	-0.5	0.8	-0.6	0.1	-6.5	1.0	0.3	104.1	165.1											
AUG	0.5	-0.7	1.0	-0.3	0.7	-0.5	0.6	0.2	104.2	165.2											
SEP	0.7	0.0	0.8	-0.3	0.1	-2.6	0.5	0.4	104.1	165.3											
OCT	0.3	-0.2	0.5	1.0	0.2	0.2	0.7	0.8	104.6	169.2											
NOV	0.3	0.4	0.3	2.1	0.8	0.3	0.5	0.6	105.1	168.9											
DEC	0.3	1.2	0.7	1.2	0.6	0.3	0.5	0.6	106.0	174.7											
1977	0.9	1.2	0.7	1.2	0.6	0.3	0.5	0.6	106.0	174.7											
JAN	0.9	2.0	0.5	1.2	0.6	0.3	0.5	0.3	106.0	174.7											
FEB	0.9	2.0	0.5	1.2	0.6	0.3	0.5	0.3	106.0	174.7											

SOURCE: PRICES AND PRICE INDEXES, CAT. NO. 62-002, INDEX NUMBERS OF FARM PRICES OF AGRICULTURAL PRODUCTS, CAT. NO. 62-003, INDEXES OF REAL DOMESTIC PRODUCT BY INDUSTRY, CAT. NO. 61-005, ESTIMATES OF LABOUR INCOME, CAT. NO. 72-005, THE LABOUR FORCE, CAT. NO. 71-001, THE CONSUMER PRICE INDEX, CAT. NO. 62-001, STATISTICS CANADA

(1) OUTPUT IS DEFINED AS TOTAL REAL DOMESTIC PRODUCT, AND EMPLOYMENT IS DEFINED ON A LABOUR FORCE SURVEY BASIS.

FOOD TABLE WANTED (OR RETURN)

COMMAND?

